

the techniques and the patients studied. A clinical trial was, therefore, set up to test the effectiveness of cryosurgery in the treatment of genital warts in men and women, with particular attention being paid to the technique and to patient acceptability.

Of 103 patients (69 men and 34 women) treated with cryosurgery 60 (39 men and 21 women) had been previously unsuccessfully treated with either podophyllin, electrocautery, or curettage, with a mean of 14.0 attendances.

Other diseases as well as genital warts were treated before or at the time of the patients' first attendance for cryosurgery. Of the 103 patients treated, 31 were excluded from the study because they were unavailable for follow up, and one was excluded because of treatment failure.

Of the 71 patients studied, 49 (69%) were cured after three or less cryosurgical sessions—that is, two weeks' treatment for patients attending weekly (Table). However, 10 (50%) of the 20 patients who had anal warts (with or without genital warts) needed more than three sessions. In those patients with anogenital warts five men and two women with anorectal warts were treated using a proctoscope. In five (7%) patients the warts recurred after apparent cure, but the recurrences were minor and responded rapidly to further treatment. Non-specific balanoposthitis occurred in one man after treatment.

The method of treatment was acceptable to patients. Ninety-one (88.3%) of the 103 patients in the trial attended until treatment was completed, although 20 of these did not attend for follow up. Discomfort and pain from thawing were reduced to a minimum by not freezing excess normal tissue. Also staging of treatment was more comfortable for the patient, although it meant additional treatment sessions in some instances.

Thus with careful attention to technique cryosurgery can be used successfully to treat genital warts, and it is acceptable to patients. The most important aspects appear to be accurate freezing of affected tissue by using two freeze-thaw cycles and KY jelly (Johnson and Johnson Ltd) to ensure adequate contact between wart and cryoprobe. The use of the Key Med variable-size chisel-tipped cryoprobes is an additional refinement.

The great advantage of cryosurgery is that it can be used as often as required where warts are extensive and where new lesions appear in untreated sites: both

Table Mean number of attendances for cryosurgery before cure

Site of warts	No. of patients	Mean number of attendances before cure	
		With previous treatment and cryosurgery (41 patients)	With cryosurgery alone (30 patients)
Men			
Penile	28	2.4	2.1
Anal or anogenital	13	8.2	2.0
Intrameatal	7	4.0	2.0
Women			
Genital	16	2.2	2.5
Anal or anogenital	7	4.2	4.3
Total attendances		4.1	2.3

of these are common problems in the management of genital warts. Furthermore, there is no scarring, and local anaesthetics, such as Anugesic cream (Warner), are only necessary with extensive vulval or anal warts. Cryosurgery was also effective in treating those warts which were difficult to manage by other methods such as, intrameatal, vaginal, cervical, anorectal, and vulval warts in pregnancy.

A further assessment of the value of cryosurgery as a primary treatment for genital warts by a comparative trial with other methods, such as podophyllin, is envisaged.

I am very grateful to Key Med (Key Med House, Stock Road, Southend-on-Sea) for the loan of the Key Med MT600 cryosurgical equipment. I also thank the consultant staff of the department for allowing me to study patients under their care and all the staff who helped to organise the appointment clinic.

Yours faithfully,

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TO THE EDITOR, *British Journal of Venereal Diseases*

#### Comparison of three- and six-day clotrimazole treatment for vaginal candidosis

Sir,

In view of the popularly held belief that patients comply better with short rather than long courses of treatment, and since Masterton *et al.* (1977) reported good results in candidal vaginitis using a three-day course of clotrimazole, we decided to carry out a short study to compare the efficacy of a three-day course of clotrimazole (Canesten) pessaries (two inserted at night) with that of a six-day course (one inserted at night).

Forty-seven patients were included in the trial and were assessed four weeks after starting treatment. The initial diagnosis of candidosis was based on microscopical examination, but follow-up assessment included microscopy and culture (Sabouraud's medium).

The results are given in the Table. The success rates for three- and six-day courses of clotrimazole were not statistically significantly different ( $\chi^2_1 = 1.35$ , and  $P = < 0.25$ ).

Recently it has been stressed that the success of any course of treatment depends on good patient compliance (Macnair *et al.*, 1978). As the default rate was low and very similar for both the three- and six-day courses of treatment, it can be concluded that there was no significant difference in compliance between the two groups of patients.

Moreover, the results show that there is no therapeutic advantage in giving a less concentrated course (one pessary nightly for six nights) over giving the shorter or more concentrated three-day course. Nevertheless, Hurley (1975) advocates longer courses as a prophylactic

Table Details of trial with clotrimazole in 47 patients

Course	No. of patients			
	Began course	Completed course	Successfully treated	Unsuccessfully treated
Three-day	19	16	15 (93.8%)	1
Six-day	28	23	17 (73.9%)	6
Total	47	39	32 (82.1%)	7

measure against relapse. In view of this the standard treatment that we have adopted in this clinic is to give two clotrimazole (Canesten) pessaries for vaginal insertion at night for six consecutive nights.

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TO THE EDITOR, *British Journal of Venereal Diseases*

## Sarcoptes scabiei infestation treated with malathion liquid

Sir,

We have recently carried out a preliminary study evaluating the use of 0.5% malathion liquid in the treatment of sarcoptes scabiei infestation. Treatment was given and followed up in 30 cases, all of which were included in the study. Diagnosis was made by the demonstration of the mite from the burrows. Malathion 0.5% would appear to be an alternative treatment for scabies (*Merck Index*, 1976).

A total of 127 consecutive male and female patients with clinical characteristics of sarcoptes scabiei infestations were examined for the presence of mite and ova. Mites were demonstrated in 41 of these patients by the following technique. Burrows seen on the hands were moistened by liquid paraffin and gently scraped with a blunt scalpel. The scrapings were spread on a glass slide, covered with a glass cover, and examined under the low power of the microscope for mites and ova.

After diagnosis 0.5% malathion liquid was prescribed and the patients were instructed to have a hot bath, thoroughly

scrubbing the skin, and to apply 0.5% malathion liquid (Derbac, Bengue) carefully to all the skin below the neck. The same clothing was worn for a further 24 hours when, after another bath, under-clothing and bed linen were changed. Clothing was disinfested by ordinary laundering or dry cleaning and hot-iron pressing. Systemic and local antibiotics were prescribed for patients who had secondary infections and calamine lotion for those who complained of itching after completing the treatment.

Patients were seen at seven-day intervals, after the initial visit, for reassessment and further treatment as required. They were also advised about any recent close social and sexual contacts and, those who complained of itching were investigated and treated. Side effects were listed by indirect questioning at the follow-up visit, and further clinical examinations were carried out to assess the efficacy of treatment.

Twenty-nine patients were adequately followed up and were included in the trial; of these 18 were men and 11 women. As one of the patients was treated twice the total number of cases treated was 30 (Table). Patients' ages ranged from 18 to 44 years. Most had a history of symptoms for less than a month; in 13 instances family and sexual contacts were also infected.

The skin symptoms persisted after the burrows and mites had disappeared. At the end of the treatment, five patients were still affected with burrows or mites or both. After one of these patients had been treated again the number of failures was reduced to four. Of these four failures one patient refused to bring his contacts for treatment.

This preliminary study with an 83% cure rate indicates that malathion 0.5% is an acceptable alternative treatment for sarcoptes scabiei infestation. These results would also appear to justify a double-blind clinical trial against the usual medication.

We are grateful to Dr R. R. Willcox for allowing us to study his patients and would like to express our thanks to Sister S. M. Conley and her nursing staff for their help in this study. The 0.5% malathion liquid was supplied by Syntex Pharmaceuticals Limited.

Yours faithfully,

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Table Clinical findings in the 30 cases of sarcoptes scabiei studied

Examination	No. of cases seen	Clinical findings									
		Burrows		Mites		Papules		Scratches		None	
		No.	%	No.	%	No.	%	No.	%	No.	%
At initial visit	30	30	100	30	100	30	100	29	97	0	0
At one week	20	1	5	1	5	9	45	7	35	6	30
At two weeks	16	0	0	0	0	3	19	2	12	12	75
At three weeks	23	3	13	2	9	5	22	5	22	16	70
At final visit	30	3	10	3	10	5	17	5	17	20	67

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